Amendments to the Claims:

This listing of claims will replace all prior versions, and listing of claims in the application.

Claims 1 -20 (Cancelled)

21. (New) A method comprising:

obtaining a source device to profile connection space transform and a destination device to profile connection space transform;

combining the source device to profile connection space transform and the destination device to profile connection space transform, thereby producing a device to device transform;

operating on a file with the device to device transform, thereby forming a modified file; and

outputting the modified file to the destination device.

22. (New) A method as recited in claim 21, wherein said combining modifies the source device to profile connection space transform with a source to destination gamut mapping transform.

23. (New) A method as recited in claim 21, wherein said combining combines the destination device to profile connection space transform with an inking manifold matching input dimensions of the destination device to profile connection space transform with output dimensions of the destination device to profile connection space transform.

24. (New) A method as recited in claim 23, wherein the inking manifold controls ink utilization.

25. (New) The method of claim 21, wherein the file is a digital image file.

26. (New) The method of claim 25, wherein the modified file is displayed by the destination device.

27. (New) A method of creating a composite transformation converting a color in a source space into a color in a destination space using [device > PCS] transformations for a source and destination device, comprising:

modifying a domain of the [device > PCS] transform from a destination device profile with an ink manifold producing a modified [device > PCS] transform with three input dimensions;

modifying a range of the [device > PCS] transform from a source device profile producing PCS coordinates all within the range of the modified [device > PCS] transform;

inverting the modified destination [device > PCS] transform using values in the modified source [device > PCS] transform to produce a [device > device] transform;

modifying a range of the [device > device] transform by applying the inking manifold transform to yield coordinates in the domain of the destination device, thereby producing a modified [device > device] transform; and

using the modified [device > device] transform to convert a color in a source space input by a source device into a color in a destination space; and

outputting the color in the destination space to the destination device.

28. (New) A method as recited in claim 27, wherein user preference information, concerning one of the ink manifold and a gamut mapping, is one of a default and extracted from the profiles.

29. (New) A method as recited in claim 27, wherein the inking manifold is the identity.

30. (New) A method as recited in claim 27, wherein the [device > PCS] transformations are one of: tags in a profile; polynomials; and multi-dimensional interpolation tables.

31. (New) A method as recited in claim 27, wherein the [device > device] transform is saved as a device link.

32. (New) A method for producing a composite transform from one device A color space to device B color space ([device A > device B]), comprising:

modifying a [device A > PCS] where colors are within the range of the [device B > PCS] transform and account for non-colorimetric requirements;

modifying a [device B > PCS] making the [device B > PCS] invertible by adding additional output channels and adding equivalent output channels to the [device A > PCS] transform;

inverting the modified [device B >PCS] transform for each value in the modified [device A> PCS] transform, thereby forming an inverted [device B > PCS] transform;

using the modified [device > device] transform to convert a first color in device A color space into a second color in device B color space; and

outputting the second color to device B.

33. (New) A method as recited in claim 32, wherein the added output channels comprise a mathematical function expressing ink utilization preferences.

34. (New) A method for producing a composite [device > device] transform from a source device color space to a destination device color space [device > device] transform, comprising:

modifying a destination [device > PCS] transform having a destination device color space to have a unique inverse producing a modified destination [device > PCS] transform;

modifying a source [device > PCS] transform to have a range contained in a range of the modified destination [device > PCS] transform;

inverting the modified destination [device > PCS] transform for each value in the modified source [device > PCS] transform, thereby forming a [device > device] transform;

converting contents of the resulting [device > device] transform back to the destination device color space, thereby producing a composite [device > device] transform; and

utilizing the composite [device > device] transform to convert a color input from a source device to a color that is output to a destination device.

35. (New) A method of creating a composite transformation converting a color in a source space from a source device into a color in a destination space for a destination device, comprising:

obtaining [device > PCS] transformations for a source and destination device each having multi-dimensional interpolation tables and obtaining user preference information extracted from the profiles;

modifying a domain of the [device > PCS] transform from a destination device profile with an ink manifold transform, thereby producing three input dimensions that are used to produce a modified [device > PCS] transform, where the inking manifold controls gray component replacement;

modifying a range of the [device > PCS] transform from a source device profile such that the PCS coordinates are all within the range of the modified [device > PCS] transform and are responsive to the user preference gamut mapping information;

inverting the modified [device > PCS] transform using values in the source transform range to produce a [device > device] transform;

modifying a range of the [device > device] transform by applying the inking manifold transform to yield coordinates in the domain of the destination device; and

transforming an image from the source device into an image for the destination device using the [device > device] transform.

36. (New) A method, comprising:

obtaining a source device to profile connection space transform and a destination device to profile connection space transform;

determining a mapping between the source device to profile connection space transform and the destination device to profile connection space transform producing a device to device transform; and

utilizing the device to device transform to convert at least one color that is input from a source device to a color that is output to a destination device.

37. (New) A method as recited in claim 36, wherein the mapping corrects for differences in viewing conditions corresponding to the PCS of the source transform and those of the PCS values of the destination transform.

38. (New) A method as recited in claim 36, wherein the mapping is chosen to preserve existing inter-relationships between source device code values.

39. (New) A method, comprising:

obtaining only forward transforms from a source device profile and a destination device profile;

combining the forward transforms producing a device to device transform; and

utilizing the device to device transform to convert at least one color that is input from a source device to a color that is output to a destination device.

40. (New) A system comprising:

a transform source having a source device to profile connection space transform and a destination device to profile connection space transform; and

a computer adapted to combine the source device to profile connection space transform and the destination device to profile connection space transform so as to produce a device to device transform;

wherein said computer is further adapted to utilize the device to device transform to convert at least one color that is input from a source device to a color that is output to a destination device.

41. (New) A system as recited in claim 40, wherein said computer maps colors from a source device to a destination device using the device to device transform.

42. (New) A system, comprising:

a source device;

a destination device; and

a computer in communication with said source device and said destination device, said computer being equipped with a computer readable storage medium having programming instructions stored therein for (a) obtaining connection space transforms for each of the source device and destination device, and (b) combining the connection space transform for the source device with the connection space transform for the destination device, thereby forming a source device to destination device transform.

43. (New) The system of claim 42, wherein the system further comprises a data input device for receiving a digital image from the source device, and a data output device for sending a digital image to the destination device, and wherein the computer readable storage medium further contains programming instructions for applying the source device to destination device transform to a digital image received from the source device, thereby producing a transformed digital image.

44. (New) The system of claim 42, wherein the computer readable storage medium further contains programming instructions for outputting the transformed digital image to the destination device.

45. (New) The system of claim 42, wherein the source device is a digital imaging device.

46. (New) The system of claim 42, wherein the source device is a scanner.

47. (New) The system of claim 42, wherein the source device is a camera.

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48. (New) The system of claim 42, wherein the source device is a display.

49. (New) The system of claim 42, wherein the destination device is a printer.

50. (New) The system of claim 42, wherein the destination device is a display.

51. (New) A method for processing digital images input from a source device for output to a destination device, comprising the steps of:

obtaining a digital image from the source device;

obtaining a connection space transform for the source device;

obtaining a connection space transform for the destination device;

producing a source device to destination device transform by combining the connection space transform for the source device with the connection space transform for the destination device;

applying the source device to destination device transform to the digital image, thereby producing a transformed digital image; and

outputting the transformed digital image to the destination device.